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DDDDDDDD      TTTTTTTTTT  RRRRRRRR      TTTTTTTTTT  EEEEEEEEEEE  SSSSSSSSS  TTTTTTTTTT
DDDDDDDD      TTTTTTTTTT  RRRRRRRR      TTTTTTTTTT  EEEEEEEEEEE  SSSSSSSSS  TTTTTTTTTT
DD           DD      TT      RR           RR      TT      SS           TT
DD           DD      TT      RR           RR      TT      SS           TT
DD           DD      TT      RR           RR      TT      SS           TT
DD           DD      TT      RR           RR      TT      SS           TT
DD           DD      TT      RRRRRRRR      TT      EEEEEEEE  SSSSSS      TT
DD           DD      TT      RRRRRRRR      TT      EEEEEEEE  SSSSSS      TT
DD           DD      TT      RR      RR      TT      EE           SS           TT
DD           DD      TT      RR      RR      TT      EE           SS           TT
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DD           DD      TT      RR           RR      TT      EE           SS           TT
DD           DD      TT      RR           RR      TT      EE           SS           TT
DDDDDDDD      TT      RR           RR      TT      EEEEEEEEEEE  SSSSSSSSS  TT
DDDDDDDD      TT      RR           RR      TT      EEEEEEEEEEE  SSSSSSSSS  TT

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LL           IIIIIII  SSSSSSSS
LL           IIIIIII  SSSSSSSS
LL           II      SS
LL           II      SS
LL           II      SS
LL           II      SS
LL           II      SSSSSS
LL           II      SSSSSS
LL           II      SS
LL           II      SS
LL           II      SS
LL           II      SS
LLLLLLLLLLLL IIIIIII  SSSSSSSS
LLLLLLLLLLLL IIIIIII  SSSSSSSS

```

(2)	44	DECLARATIONS
(3)	67	TST\$CONN_DTR - CONNECT TEST
(4)	158	TST\$DATA_DTR - DATA TEST
(5)	344	TST\$DISC_DTR - DISCONNECT TEST
(6)	441	TST\$INTE_DTR - INTERRUPT TEST
(7)	570	TST\$MISC_DTR - MISCELLANEOUS TEST
(8)	619	TST\$BAD_DTR - INVALID TEST TYPE

```
0000 1 .TITLE TST&DTRTEST - DTR TEST ROUTINES
0000 2 .IDENT 'V04-000'
0000 3
0000 4
0000 5 *****
0000 6
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0000 24
0000 25
0000 26 *****
0000 27
0000 28
0000 29 ++
0000 30 FACILITY: DTS/DTR DECNET TEST PACKAGE
0000 31
0000 32 ABSTRACT:
0000 33 THIS MODULE IMPLEMENTS THE CONNECT, DATA, DISCONNECT,
0000 34 INTERRUPT, AND MISCELLANEOUS TEST SEQUENCES FOR DTR.
0000 35
0000 36 ENVIRONMENT: DTR RUNS IN USER MODE AND REQUIRES NETWORK PRIVILEGE.
0000 37
0000 38 AUTHOR: JAMES A. KRYCKA, CREATION DATE: 11-AUG-77
0000 39
0000 40 MODIFICATIONS:
0000 41
0000 42 --
```



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0000 44      .SBTTL  DECLARATIONS
0000 45
0000 46  :
0000 47  : INCLUDE FILES:
0000 48  :
0000 49      $DTSDEF
0000 50      CMDDEF      ; DEFINE COMMAND LANGUAGE SYMBOLS
0000 51      EFNDEF      ; DEFINE EFN'S AND FUNCTION CODES
0000 52      $MSGDEF     ; DEFINE MAILBOX MESSAGE ID CODES
0000 53      .IIF NE K_LIST_MEB, .LIST MEB ; DEFINED IN DTPREFIX.MAR
0000 54  :
0000 55  : MACROS:
0000 56  :
0000 57  : NONE
0000 58  :
0000 59  : EQUATED SYMBOLS:
0000 60  :
0000 61  : NONE
0000 62  :
0000 63  : OWN STORAGE:
0000 64  :
0000 65  : NONE

```

```
0000 67 .SBTTL TST$CONN_DTR - CONNECT TEST
0000 68 .PSECT TST$CODE NOWRT
0000 69 RT:: ; SYMBOL FOR DEBUGGING PURPOSES
0000 70
0000 71 ;++
0000 72 : FUNCTIONAL DESCRIPTION:
0000 73 :
0000 74 : NONE
0000 75 :
0000 76 : CALLING SEQUENCE:
0000 77 :
0000 78 : BSB/JSB TST$CONN_DTR
0000 79 :
0000 80 : INPUT PARAMETERS:
0000 81 :
0000 82 : R9 TEST SUBFUNCTION VALUE
0000 83 : R10 ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
0000 84 : R11 ADDRESS OF NCB DESCRIPTOR BLOCK
0000 85 :
0000 86 : IMPLICIT INPUTS:
0000 87 :
0000 88 : NONE
0000 89 :
0000 90 : OUTPUT PARAMETERS:
0000 91 :
0000 92 : R0 COMPLETION CODE
0000 93 : R1 ADDRESS OF TEST ID STRING
0000 94 : R2-R11 DESTROYED
0000 95 :
0000 96 : IMPLICIT OUTPUTS:
0000 97 :
0000 98 : NONE
0000 99 :
0000 100 : COMPLETION CODES:
0000 101 :
0000 102 : R0 1 = SUCCESS; 0 = FAILURE
0000 103 :
0000 104 : SIDE EFFECTS:
0000 105 :
0000 106 : NONE
0000 107 :
0000 108 : --
0000 109 :
0000 110 TST$CONN_DTR:: ; ENTRY POINT
05 59 91 0000 111 CMPB R9,#5 ;
0000 112 BLEQU 5$ ;
0000 113 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
50 01F58053 8F D0 0008 114 MOVL #DTS$ BADSUBFCN,R0 ; GIVE REASON FOR FAILURE
0000 115 BRB CONN FAILURE ;
56 59 FF 8F 9C 0011 116 5$: ROTL #-1,R9,R6 ;
0016 117 ;
0016 118 ;
0016 119 $CASEB SELECTOR=R6,DISPL=<-
0016 120 10$-
0016 121 20$-
0016 122 30$-
0016 123 > ;
; DIVIDE CONTEST FIELD BY 2 TO
; DETERMINE WHAT TYPE (IF ANY)
; OF USERDATA IS TO BE RETURNED.
; RETURN:
; NO USERDATA
; STANDARD DATA
; RECEIVED DATA
```

```

      6A 94 0020 124 10$: CLRB (R10) ; ZERO LENGTH OF USERDATA STRING
      09 11 0022 125 BRB 30$ ; CONTINUE
      BA 10 90 0024 126 20$: MOVB #16,(R10)+ ; STORE 16 BYTES OF THE STANDARD
      0001'CF 10 28 0027 127 ; DATA PATTERN AS A COUNTED STRING
      0027 128 MOVC3 #16,W^TST$GT_STANDARD+1,(R10) ;
      002D 129
      002D 130
      002D 131 ; RESPOND WITH CONNECT ACCEPT OR CONNECT REJECT AS APPROPRIATE.
      002D 132
      002D 133
      52 02 D0 002D 134 30$: MOVL #EFN_K_CONN_REJE,R2 ; ASSUME CONNECT REJECT
      03 59 E9 0030 135 BLBC R9,40$ ; IS IT A REJECT REQUEST?
      52 01 D0 0033 136 MOVL #EFN_K_CONN_ACCE,R2 ; NO, IT'S A CONNECT ACCEPT
      54 5B D0 0036 137 40$: MOVL R11,R4 ; P2 = ADDRESS OF NCB DESCRIPTOR BLOCK
      FFC4' 30 0039 138 BSBW TST$QIOW ; RESPOND TO CONNECT INITIATE
      25 59 E9 003C 139 BLBC R9,CONN_SUCCESS ; DID WE REJECT THE CONNECTION?
      003F 140 ; NO, WAIT FOR DISCONNECT FROM DTS
      52 00 D0 003F 141 MOVL #EFN_K_READ_MAIL,R2 ; GET FUNCTION/INDEX CODE
      54 00'8F 9A 0042 142 MOVZBL #TST$K_MAILBUF,R4 ; GET MAILBOX BUFFER SIZE
      FFB7' 30 0046 143 BSBW TST$QIOW ; READ MAILBOX
      FFB4' 30 0049 144 BSBW TST$EXAM_MAIL ; PARSE MAILBOX MESSAGE
      33 56 B1 004C 145 CMPW R6,#MSG$-DISCON ; WAS IT A SYNCHRONOUS DISCONNECT?
      13 13 004F 146 BEQLU CONN_SUCCESS ; YES, THAT'S OK
      30 56 B1 0051 147 CMPW R6,#MSG$-ABORT ; WAS IT A DISCONNECT ABORT?
      OE 13 0054 148 BEQLU CONN_SUCCESS ; YES, THAT'S OK TOO
      50 01F5803B 8F D0 0056 149 MOVL #DTS$-BADMAIL,R0 ; NOTE INVALID MAIL
      0000'CF 56 3C 005D 150 MOVZWL R6,W^TST$GL_FAOARG ; NOTE TYPE OF MAIL
      03 11 0062 151 BRB CONN_FAILURE
      0064 152 CONN_SUCCESS:
      50 01 D0 0064 153 MOVL #1,R0 ; TEST WAS SUCCESSFUL
      0067 154 CONN_FAILURE: ; SET COMPLETION CODE TO SUCCESS
      51 0000'CF 9E 0067 155 MOVAB W^TST$GT_CONN,R1 ; ENTER HERE IF TEST FAILED
      05 006C 156 RSB ; RETURN ADDRESS OF TEST ID STRING
      ; YES, EXIT
```



```
006D 158 .SBTTL TST$DATA_DTR - DATA TEST
000C006D 159 .PSECT TST$CODE NOWRT
006D 160
006D 161 :++
006D 162 : FUNCTIONAL DESCRIPTION:
006D 163 :
006D 164 : NONE
006D 165 :
006D 166 : CALLING SEQUENCE:
006D 167 :
006D 168 : BSB/JSB TST$DATA_DTR
006D 169 :
006D 170 : INPUT PARAMETERS:
006D 171 :
006D 172 : R9 TEST SUBFUNCTION VALUE
006D 173 : R10 ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
006D 174 : R11 ADDRESS OF NCB DESCRIPTOR BLOCK
006D 175 :
006D 176 : IMPLICIT INPUTS:
006D 177 :
006D 178 : NONE
006D 179 :
006D 180 : OUTPUT PARAMETERS:
006D 181 :
006D 182 : R0 COMPLETION CODE
006D 183 : R1 ADDRESS OF TEST ID STRING
006D 184 : R2-R11 DESTROYED
006D 185 :
006D 186 : IMPLICIT OUTPUTS:
006D 187 :
006D 188 : NONE
006D 189 :
006D 190 : COMPLETION CODES:
006D 191 :
006D 192 : R0 1 = SUCCESS; 0 = FAILURE
006D 193 :
006D 194 : SIDE EFFECTS:
006D 195 :
006D 196 : NONE
006D 197 :
006D 198 :--
006D 199
006D 200 TST$DATA_DTR::
006D 201 CMPB R9,#VAL_K_TYPE_ECHO : ENTRY POINT
0070 202 BLEQU 10$ :
0072 203 BSBW TST$CONN REJECT : ISSUE CONNECT REJECT
50 01F58053 8F D0 0075 204 MOVL #DTS$_BADSUBFCN,R0 : GIVE REASON FOR FAILURE
007C 205 BRB 55$ :
007E 206 10$: MOVAB 3(R10),R0 : SAVE REMAINING FIELDS IN MESSAGE
0082 207 CMPB (R0),#VAL_K_FLOW_MESS :
0085 208 BEQL 20$ :
0087 209 BSBW TST$CONN REJECT : ISSUE CONNECT REJECT
50 01F58063 8F D0 008A 210 MOVL #DTS$_INVOPTION,R0 : GIVE REASON FOR FAILURE
0091 211 BRB 55$ :
0093 212 20$: MOVAB (R0)+,W^TST$GB_FLOW : STORE FCOPT VALUE
0098 213 CMPB (R0),#1 :
009B 214 BEQL 30$ :
```



```
50 01F58063 00F2 30 009D 215 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
      8F DO 00A0 216 MOVL #DTS$_INVOPTION,R0 ; GIVE REASON FOR FAILURE
      40 11 00A7 217 BRB 55$ ;
0000'CF 80 90 00A9 218 30$: MOV B (R0)+,W^TST$GB_RQUEUE ; STORE FCVAL VALUE
      60 95 00AE 219 TSTB (R0) ;
      0C 13 00B0 220 BEQL 40$ ;
      00DD 30 00B2 221 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
50 01F58063 8F DO 00B5 222 MOVL #DTS$_INVOPTION,R0 ; GIVE REASON FOR FAILURE
      28 11 00BC 223 BRB 55$ ;
0000'CF 80 90 00BE 224 40$: MOV B (R0)+,W^TST$GB_NAK ; STORE NAK VALUE
      60 95 00C3 225 TSTB (R0) ;
      0C 13 00C5 226 BEQL 50$ ;
      00C8 30 00C7 227 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
50 01F58063 8F DO 00CA 228 MOVL #DTS$_INVOPTION,R0 ; GIVE REASON FOR FAILURE
      16 11 00D1 229 BRB 55$ ;
0000'CF 80 90 00D3 230 50$: MOV B (R0)+,W^TST$GB_BACK ; STORE BPVAL VALUE
1000 8F 60 B1 00D8 231 CMPW (R0),#MAX_K_SIZE_DA ;
      0D 15 00DD 232 BLEQ 60$ ;
      00B0 30 00DF 233 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
50 01F58063 8F DO 00E2 234 MOVL #DTS$_INVOPTION,R0 ; GIVE REASON FOR FAILURE
      009B 31 00E9 235 55$: BRW DATA FAILURE ;
0000'CF 80 B0 00EC 236 60$: MOVW (R0)+,W^TST$GW_SIZE ; STORE MSGLEN VALUE
      00F1 237 ;
      00F1 238 ;
      00F1 239 ; RESPOND TO CONNECT INITIATE WITH A CONNECT ACCEPT WITHOUT USERDATA.
      00F1 240 ;
      00F1 241 ;
0099 30 00F1 242 BSBW TST$CONN_ACCEPT ;
      00F4 243 ;
      00F4 244 ; DATA TEST INITIALIZATION
      00F4 245 ;
      00F4 246 ;
      00F4 247 ;
0000'CF 7C 00F4 248 CLRQ W^TST$GL_XMITDATA ; ZERO TRANSMIT AND RECEIVE
      0000'CF 7C 00F8 249 CLRQ W^TST$GL_XMITINTE ; MESSAGE COUNTERS
      00FC 250 ; ZERO TRANSMIT AND RECEIVE
0000'CF 01 DO 00FC 251 ; INTERRUPT MESSAGE COUNTERS
      0000'CF 94 0101 252 MOVL #1,W^TST$GL_STATUS ; SET AST STATUS CODE TO SUCCESS
00000000'EF 00000000'EF DE 0105 253 CLRB W^TST$GB_ASTFLAGS ; NOTE TIMER RUNNING
00000004'EF 00000000'EF DE 0110 254 MOVAL TST$QB_QHEAD,TST$QB_QHEAD ; INIT QUEUE HEAD
      011B 255 MOVAL TST$QB_QHEAD,TST$QB_QHEAD+4
      011B 256 ;
      011B 257 ; PUT REPETITIONS OF THE STANDARD DATA PATTERN IN THE MESSAGE BUFFER
      011B 258 ; BEGINNING AT BUFFER+4.
      011B 259 ;
      011B 260 ;
53 0000'CF 9E 011B 261 MOVAB W^TST$GB_XMITBUF,R3 ; GET ADDRESS OF MESSAGE
      83 D4 0120 262 CLRL (R3)+ ; INITIALIZE MESSAGE SEQUENCE NUMBER
54 0000'CF 3C 0122 263 MOVZWL W^TST$GW_SIZE,R4 ; GET MESSAGE SIZE
      54 04 B1 0127 264 CMPW #4,R4 ; ANY DATA IN MSG?
      06 18 012A 265 BGEQ 70$ ; NO, SO WHY FILLBUFFER
      54 04 C2 012C 266 SUBL2 #4,R4 ; REDUCE SIZE ACCORDINGLY
      FECE' 30 012F 267 BSBW TST$STANDARD ; PUT STD DATA PATTERN IN BUFFER
      0132 268 ;
      0132 269 70$: ;
      0132 270 ;
      0132 271 ; RECEIVE [AND TRANSMIT] DATA MESSAGES UNTIL DTS DISCONNECTS THE LINK
```

```
0132 272 ;
0132 273 ;
54 52 07 D0 0132 274      MOVL      #EFN_K_RECV_DATA,R2      ; GET FUNCTION/INDEX CODE
0000'CF 3C 0135 275      MOVZWL   W^TST$GW_SIZE,R4        ; GET MESSAGE SIZE
55 0000'CF 9E 013A 276      MOVAB    W^TST$RECVAST_DTR,R5     ; GET ADDRESS OF AST ROUTINE
      FEBE' 30 013F 277      BSBW     TST$QIOAST             ; START UP RECEIVE MESSAGE STREAM
      52 00  D0 0142 278      MOVL     #EFN_K_READ_MAIL,R2    ; GET FUNCTION/INDEX CODE
54 00'BF 9A 0145 279      MOVZBL   #TST$K_MAILBUF,R4        ; GET MAILBOX BUFFER SIZE
55 0000'CF 9E 0149 280      MOVAB    W^TST$MAILAST_DTR,R5     ; GET ADDRESS OF AST ROUTINE
      FEAF' 30 014E 281      BSBW     TST$QIOAST             ; START UP READ MAILBOX STREAM
      0151 282
      0151 283
      0151 284      : WAIT FOR LINK DISCONNECT
      0151 285
      0151 286
      07 11 0151 287      BRB        110$                    ;CHECK FOR ASTS
      0153 288 100$:
      0153 289      $HIBER_S                                ;GO TO SLEEP TILL AN AST
      015A 290 110$:
50 23 0000'CF EB 015A 291      BLBS     W^TST$GB_ASTFLAGS,120$  ;JUMP IF TIMER EXPIRED
00000000'FF OF 015F 292      REMQUE   @TST$QB_QHEAD,R0        ;DEQUEUE AN AST
      EB 1D 0166 293      BVS        100$                    ;NOTHING THERE ,SLEEP
52 0000'CO D0 0168 294      MOVL     TST$QB_CODE(R0),R2        ;QIO FUNCTION/CODE
54 0000'CO D0 016D 295      MOVL     TST$QB_BUFLN(R0),R4        ;SIZE FOR DATA MSG
55 0000'CO D0 0172 296      MOVL     TST$QB_ASTADR(R0),R5      ;AST ADDRESS FOR QIO
      FE86' 30 0177 297      BSBW     TST$QIOAST             ;DO QIO WITH AST
      DA 51 EB 017A 298      CHECK_SS
      05 11 017D 299      BLBS     R1,110$                    ;MAKE SERVICE OKAY
      0180 300      BRB        DATA_FAILURE                 ;IF OKAY BR
      0182 301 120$:
      0182 302
      0182 303      : DATA TEST IS FINISHED
      0182 304
      0182 305
      0182 306
50 0000'CF D0 0182 307      MOVL     W^TST$GL_STATUS,R0        ; POST STATUS
      0187 308 DATA_FAILURE:
51 0000'CF 9E 0187 309      MOVAB    W^TST$GT_DATA,R1          ; ENTER HERE IF TEST FAILED
      05 018C 310      RSB
      018D 311      : EXIT
      018D 312
      018D 313      : SUBROUTINE TO ISSUE A CONNECT ACCEPT WITHOUT USERDATA.
      018D 314
      018D 315
      018D 316 TST$CONN ACCEPT::
52 01 D0 018D 317      MOVL     #EFN_K_CONN_ACCE,R2          ; CONTROL POINT
      03 11 0190 318      BRB        ACCEPT_REJECT          ; GET FUNCTION/INDEX CODE
      0192 319      : JOIN COMMON CODE
      0192 320
      0192 321      : SUBROUTINE TO ISSUE A CONNECT REJECT WITHOUT USERDATA.
      0192 322
      0192 323
      0192 324 TST$CONN REJECT::
52 02 D0 0192 325      MOVL     #EFN_K_CONN_REJE,R2          ; CONTROL POINT
      0195 326 ACCEPT_REJECT:
      0195 327      : CONTROL POINT
      0195 328 ;
```

```
0195 329 : AN ALTERNATE TO THE FOLLOWING TWO INSTRUCTIONS IS:
0195 330 :
0195 331 :         CLRB      (R10)
0195 332 :
0195 333 : THE LONGER SEQUENCE BELOW IS USED TO CHECKOUT NETACP'S HANDLING
0195 334 : OF NO USERDATA STRING PRESENT.
0195 335 :
0195 336 :
6B  8A  22  90 0195 337 :         MOVB      #^A\''\,(R10)+      ; TERMINATE NCB STRING BEFORE
5A  54  04  AB  C3 0198 338 :         :         COUNTED USERDATA STRING
54  5B  D0  0198 339 :         :         REDUCE SIZE IN NCB DESCRIPTOR
FE5D' 30  019D 340 :         :         P2 = ADDRESS OF NCB DESCRIPTOR BLOCK
05  01A0 341 :         :         ISSUE THE CONNECT REJECT
01A3 342 :         :         EXIT
01A3 342 :         :         RSB
```



```
000001A4 344 .SBTTL TST$DISC_DTR - DISCONNECT TEST
01A4 345 .PSECT TST$CODE- NOWRT
01A4 346
01A4 347
01A4 348
01A4 349
01A4 350
01A4 351
01A4 352
01A4 353
01A4 354
01A4 355
01A4 356
01A4 357
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01A4 386
01A4 387
01A7 388
01A9 389
01AC 390
01B3 391
01B5 392
01B5 393
01B5 394
01B5 395
01B5 396
01B5 397
01B8 398
01BB 399
01BD 400

      .SBTTL TST$DISC_DTR - DISCONNECT TEST
      .PSECT TST$CODE- NOWRT

      **
      FUNCTIONAL DESCRIPTION:
      NONE
      CALLING SEQUENCE:
      BSB/JSB TST$DISC_DTR
      INPUT PARAMETERS:
      R9      TEST SUBFUNCTION VALUE
      R10     ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
      R11     ADDRESS OF NCB DESCRIPTOR BLOCK
      IMPLICIT INPUTS:
      NONE
      OUTPUT PARAMETERS:
      R0      COMPLETION CODE
      R1      ADDRESS OF TEST ID STRING
      R2-R11  DESTROYED
      IMPLICIT OUTPUTS:
      NONE
      COMPLETION CODES:
      R0      1 = SUCCESS; 0 = FAILURE
      SIDE EFFECTS:
      NONE
      --
TST$DISC_DTR::
      CMPB    R9,#5
      BLEQU   5$
      BSBW    TST$CONN_REJECT
      MOVL    #DTS$BADSUBFCN,R0
      BRB     DISC_FAILURE
      ;
      ; ENTRY POINT
      ;
      ; ISSUE CONNECT REJECT
      ; GIVE REASON FOR FAILURE
      ;
      ; RESPOND TO CONNECT INITIATE WITH A CONNECT ACCEPT WITHOUT USERDATA.
      ;
      5$:     MOVB    (R10),R7
      BSBW    TST$CONN_ACCEPT
      DECL    R10
      MOVB    R7,(R10)
      ; SAVE USERDATA STRING COUNT
      ; RESTORE POINTER
      ; RESTORE USERDATA STRING COUNT
```

05 59 91 01A4 387
OC 1B 01A7 388
FFE6 30 01A9 389
50 01F58053 8F D0 01AC 390
4B 11 01B3 391
01B5 392
01B5 393
01B5 394
01B5 395
01B5 396
57 6A 90 01B5 397
F1D2 30 01B8 398
5A D7 01BB 399
6A 57 90 01BD 400

```
01C0 401
01C0 402
01C0 403 : CONTINUE SET-UP FOR DISCONNECT OF LINK JUST ESTABLISHED.
01C0 404 :
01C0 405 :
56 54 0000'CF 7E 01C0 406 MOVAB W^TST$GQ_DEACCESS,R4 : P2 = ADDR OF USERDATA DESC BLOCK
59 FF 8F 9C 01C5 407 ROTL #-1,R9,R6 : DIVIDE DISTEST FIELD BY 2 TO
01CA 408 : DETERMINE WHAT TYPE (IF ANY)
01CA 409 : OF USERDATA IS TO BE RETURNED.
01CA 410 $CASEB SELECTOR=R6,DISPL=<- : RETURN:
01CA 411 10$- : NO USERDATA
01CA 412 20$- : STANDARD DATA
01CA 413 30$- : RECEIVED DATA
01CA 414 > :
54 D4 01D4 415 10$: CLRL R4 : P2 = 0: SPECIFY NO USERDATA
19 11 01D6 416 BRB 40$ : CONTINUE
64 11 D0 01D8 417 20$: MOVL #<1+16>,(R4) : SPECIFY SIZE OF USERDATA
0000'CF 10 90 01DB 418 : COUNTED STRING
04 A4 0000'CF 09 9E 01E0 419 MOVAB #16,W^TST$GT_STANDARD : MODIFY COUNT
64 0A 11 01E6 420 MOVAB W^TST$GT_STANDARD,4(R4) : SPECIFY ADDRESS OF COUNTED STRING
64 6A 9A 01E8 421 BRB 40$ : CONTINUE
04 A4 64 D6 01EB 422 30$: MOVZBL (R10),(R4) : SPECIFY SIZE OF RECEIVED DATA
5A D0 01ED 423 INCL (R4) : COUNTED STRING
01F1 424 MOVL R10,4(R4) : SPECIFY ADDRESS OF COUNTED STRING
01F1 425 :
01F1 426 :
01F1 427 : DETERMINE WHETHER TO RESPOND WITH A SYNCHRONOUS DISCONNECT OR A
01F1 428 : DISCONNECT ABORT.
01F1 429 :
01F1 430 :
52 03 D0 01F1 431 40$: MOVL #EFN_K_DISC_SYNC,R2 : ASSUME SYNCHRONOUS DISCONNECT
03 59 E9 01F4 432 BLBC R9,50$- : IS IT A SYNC DISCONNECT REQUEST?
52 04 D0 01F7 433 MOVL #EFN_K_DISC_ABRT,R2 : NO IT'S A DISCONNECT ABORT
FE03' 30 01FA 434 50$: BSBW TST$QIOW : DISCONNECT THE LINK
01FD 435 DISC_SUCCESS: : TEST WAS SUCCESSFUL
50 01 D0 01FD 436 MOVL #1,R0 : SET COMPLETION CODE TO SUCCESS
0000'CF 09 9E 0200 437 DISC_FAILURE: : ENTER HERE IF TEST FAILED
51 05 0205 438 MOVAB W^TST$GT_DISC,R1 : RETURN ADDRESS OF TEST ID STRING
439 RSB : EXIT
```

```
0000 0206 441 .SBTTL TST$INTE_DTR - INTERRUPT TEST
      0206 442 .PSECT TST$CODE NOWRT
      0206 443
      0206 444 :++
      0206 445 FUNCTIONAL DESCRIPTION:
      0206 446
      0206 447 NONE
      0206 448
      0206 449 CALLING SEQUENCE:
      0206 450
      0206 451 BSB/JSB TST$INTE_DTR
      0206 452
      0206 453 INPUT PARAMETERS:
      0206 454
      0206 455 R9 TEST SUBFUNCTION VALUE
      0206 456 R10 ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
      0206 457 R11 ADDRESS OF NCB DESCRIPTOR BLOCK
      0206 458
      0206 459 IMPLICIT INPUTS:
      0206 460
      0206 461 NONE
      0206 462
      0206 463 OUTPUT PARAMETERS:
      0206 464
      0206 465 R0 COMPLETION CODE
      0206 466 R1 ADDRESS OF TEST ID STRING
      0206 467 R2-R11 DESTROYED
      0206 468
      0206 469 IMPLICIT OUTPUTS:
      0206 470
      0206 471 NONE
      0206 472
      0206 473 COMPLETION CODES:
      0206 474
      0206 475 R0 1 = SUCCESS; 0 = FAILURE
      0206 476
      0206 477 SIDE EFFECTS:
      0206 478
      0206 479 NONE
      0206 480
      0206 481 :--
      0206 482
      0206 483 TST$INTE_DTR::
      0206 484 CMPB R9,#VAL_K_TYPE_ECHO ; ENTRY POINT
      0206 485 BLEQU 10$ ;
      0206 486 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
      0206 487 MOVL #DTSS_BADSUBFCN,R0 ; GIVE REASON FOR FAILURE
      0206 488 BRB 15$ ; INTERRUPT FAILURE
      0206 489 10$: CMPB 3(R10),#1 ;
      0206 490 BEQL 20$ ;
      0206 491 BSBW TST$CONN REJECT ; ISSUE CONNECT REJECT
      0206 492 MOVL #DTSS_INVOPTION,R0 ; GIVE REASON FOR FAILURE
      0206 493 15$: BRW INTE FAILURE ;
      0206 494 20$: MOVB 3(R10),W^TST$GB_RQUEUE ; STORE FCVAL VALUE
      0206 495 MOVW #MAX_K_SIZE_IN,W^TST$GW_SIZE ; STORE INTERRUPT MESSAGE SIZE
      0206 496 ; SINCE THE TEST REQUEST DOES NOT
      0206 497 ; SPECIFY A SIZE, MAKE IT THE
```

```
03 59 91 0206 484
      0C 18 0209 485
50 01F58053 8F 30 020B 486
      10 11 0215 487
      01 03 AA 91 0217 488
      0D 13 021B 489
      FF72 30 021D 490
50 01F58063 8F 30 021F 491
      0091 31 0221 492
0000'CF 03 AA 90 0223 493
      10 B0 0225 494
      0000'CF 0227 495
      0229 496
      0231 497
```



```
0235 498 : MAXIMUM SIZE
0235 499
0235 500
0235 501 : RESPOND TO CONNECT INITIATE WITH A CONNECT ACCEPT WITHOUT USERDATA.
0235 502
0235 503
FF55 30 0235 504 BSBW TST$CONN_ACCEPT :
0235 505
0238 506 : INTERRUPT TEST INITIALIZATION
0238 507
0238 508
0238 509
0000'CF 7C 0238 510 CLRQ W^TST$GL_XMITDATA : ZERO TRANSMIT AND RECEIVE
023C 511 : MESSAGE COUNTERS
0000'CF 7C 023C 512 CLRQ W^TST$GL_XMITINTE : ZERO TRANSMIT AND RECEIVE
0000'CF 01 D0 0240 513 MOVL #1,W^TST$GL_STATUS : SET AST STATUS CODE TO SUCCESS
0245 514 : INTERRUPT MESSAGE COUNTERS
0000'CF 94 0245 515 CLRB W^TST$GB_ASTFLAGS : NOTE TIMER RUNNING
00000000'EF 00000000'EF DE 0249 516 MOVAL TST$QB_QHEAD,TST$QB_QHEAD;INIT QUEUE HEAD
00000004'EF 00000000'EF DE 0254 517 MOVAL TST$QB_QHEAD,TST$QB_QHEAD+4
025F 518 : PUT REPETITIONS OF THE STANDARD DATA PATTERN IN THE INTERRUPT MESSAGE BUFFER
025F 519 : BEGINNING AT BUFFER+4.
025F 520
025F 521
025F 522
53 0000'CF 9E 025F 523 MOVAB W^TST$GB_INTEBUF,R3 : GET ADDRESS OF MESSAGE
83 D4 0264 524 CLRL (R3)+ : INITIALIZE MESSAGE SEQUENCE NUMBER
54 0000'CF 3C 0266 525 MOVZWL W^TST$GW_SIZE,R4 : GET MESSAGE SIZE
54 04 B1 026B 526 CMPW #4,R4 : ANY DATA IN MSG?
06 18 026E 527 BGEQ 30$ : NOPE DONT FILL BUFFER
54 04 C2 0270 528 SUBL2 #4,R4 : REDUCE SIZE ACCORDINGLY
FD8A' 30 0273 529 BSBW TST$STANDARD : PUT STD DATA PATTERN IN BUFFER
0276 530
0276 531 30$:
0276 532 :
0276 533 : RECEIVE [AND TRANSMIT] INTERRUPT MESSAGES UNTIL DTS DISCONNECTS THE LINK
0276 534 :
0276 535
52 00 D0 0276 536 MOVL #EFN_K_READ_MAIL,R2 : GET FUNCTION/INDEX CODE
54 00'8F 9A 0279 537 MOVZBL #TST$K_MAILBUF,R4 : GET MAILBOX BUFFER SIZE
55 0000'CF 9E 027D 538 MOVAB W^TST$MAILAST_DTR,R5 : GET ADDRESS OF AST ROUTINE
FD7B' 30 0282 539 BSBW TST$QIOAST : START UP READ MAILBOX STREAM
0285 540
0285 541 : WAIT FOR LINK DISCONNECT
0285 542 :
0285 543 :
0285 544
07 11 0285 545 BRB 110$ :CHECK FOR ASTS
0287 546 100$:
0287 547 $HIBER_S :GO TO SLEEP TILL AN AST
028E 548 110$:
028E 549 BLBS W^TST$GB_ASTFLAGS,120$ :JUMP IF TIMER EXPIRED
50 23 0000'CF EB 028E 549 REMQUE @TST$QB_QHEAD,R0 :DEQUEUE AN AST
00000000'FF OF 0293 550 BVS 100$ :NOTHING THERE ,SLEEP
EB 1D 029A 551 MOVL TST$QB_CODE(R0),R2 :QIO FUNCTION/CODE
52 0000'CO D0 029C 552 MOVL TST$QB_BUFLN(R0),R4 :SIZE FOR DATA MSG
54 0000'CO D0 02A1 553 MOVL TST$QB_ASTADR(R0),R5 :AST ADDRESS FOR QIO
55 0000'CO D0 02A6 554
```

TST\$DTRTEST
V04-000

- DTR TEST ROUTINES
TST\$INTE_DTR - INTERRUPT TEST

I 2

16-SEP-1984 01:27:40 VAX/VMS Macro V04-00
5-SEP-1984 00:22:20 [DTS\$DTR.SRC]DTRTEST.MAR;1

Page 13
(6)

```
FD52' 30 02AB 555 BSBW TST$QIOAST ;DO QIO WITH AST
          02AE 556 CHECK_SS ;MAKE SERVICE OKAY
07 51 E9 02B1 557 BLBC R1,INTE_FAILURE ;LINK ABORTED
DB 11 02B4 558 BRB 110$ ;DEQUEUE ANOTHER
          02B6 559 120$:
          02B6 560
          02B6 561
          02B6 562 : INTERRUPT TEST IS FINISHED
          02B6 563 :
          02B6 564
50 0000'CF D0 02B6 565 MOVL W*TST$GL_STATUS,R0 ; POST STATUS
          02B8 566 INTE_FAILURE: ; ENTER HERE IF TEST FAILED
51 0000'CF 9E 02B8 567 MOVAB W*TST$GT_INTE,R1 ; RETURN ADDRESS OF TEST ID STRING
          05 02C0 568 RSB ; EXIT
```

```
0000 02C1 570      .SBTTL TST$MISC_DTR - MISCELLANEOUS TEST
      02C1 571      .PSECT TST$CODE-      NOWRT
      02C1 572
      02C1 573      ++
      02C1 574      FUNCTIONAL DESCRIPTION:
      02C1 575
      02C1 576      NONE
      02C1 577
      02C1 578      CALLING SEQUENCE:
      02C1 579
      02C1 580      BSB/JSB TST$MISC_DTR
      02C1 581
      02C1 582      INPUT PARAMETERS:
      02C1 583
      02C1 584      R9      TEST SUBFUNCTION VALUE
      02C1 585      R10     ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
      02C1 586      R11     ADDRESS OF NCB DESCRIPTOR BLOCK
      02C1 587
      02C1 588      IMPLICIT INPUTS:
      02C1 589
      02C1 590      NONE
      02C1 591
      02C1 592      OUTPUT PARAMETERS:
      02C1 593
      02C1 594      R0      COMPLETION CODE
      02C1 595      R1      ADDRESS OF TEST ID STRING
      02C1 596      R2-R11  DESTROYED
      02C1 597
      02C1 598      IMPLICIT OUTPUTS:
      02C1 599
      02C1 600      NONE
      02C1 601
      02C1 602      COMPLETION CODES:
      02C1 603
      02C1 604      RC      1 = SUCCESS; 0 = FAILURE
      02C1 605
      02C1 606      SIDE EFFECTS:
      02C1 607
      02C1 608      NONE
      02C1 609
      02C1 610      --
      02C1 611
      02C1 612 TST$MISC_DTR::
      02C1 613 MISC_SUCCESS:
      02C1 614      MOVL      #1,R0
      02C4 615 MISC_FAILURE:
      02C4 616      MOVAB     W*TST$GT_MISC,R1
      02C9 617      RSB
      50 01 00
51 0000'CF 9E
05 02C9 617
```

```
      : ENTRY POINT
      : TEST WAS SUCCESSFUL
      : SET COMPLETION CODE TO SUCCESS
      : ENTER HERE IF TEST FAILED
      : RETURN ADDRESS OF TEST ID STRING
      : EXIT
```



```
000002CA 619      .SBTTL TST$BAD_DTR - INVALID TEST TYPE
02CA 620      .PSECT TST$CODE      NOWRT
02CA 621
02CA 622      ;++
02CA 623      ; FUNCTIONAL DESCRIPTION:
02CA 624      ;
02CA 625      ;     NONE
02CA 626
02CA 627      ; CALLING SEQUENCE:
02CA 628      ;
02CA 629      ;     BSB/JSB TST$BAD_DTR
02CA 630
02CA 631      ; INPUT PARAMETERS:
02CA 632      ;
02CA 633      ;     R9      TEST SUBFUNCTION VALUE
02CA 634      ;     R10     ADDRESS OF NCB USERDATA FIELD (COUNTED ASCII STRING)
02CA 635      ;     R11     ADDRESS OF NCB DESCRIPTOR BLOCK
02CA 636
02CA 637      ; IMPLICIT INPUTS:
02CA 638      ;
02CA 639      ;     NONE
02CA 640
02CA 641      ; OUTPUT PARAMETERS:
02CA 642      ;
02CA 643      ;     R0      COMPLETION CODE
02CA 644      ;     R1      ADDRESS OF TEST ID STRING
02CA 645      ;     R2-R11  DESTROYED
02CA 646
02CA 647      ; IMPLICIT OUTPUTS:
02CA 648      ;
02CA 649      ;     NONE
02CA 650
02CA 651      ; COMPLETION CODES:
02CA 652      ;
02CA 653      ;     R0      8 = FAILURE
02CA 654
02CA 655      ; SIDE EFFECTS:
02CA 656      ;
02CA 657      ;     NONE
02CA 658
02CA 659      ; --
02CA 660
02CA 661 TST$BAD_DTR::
02CA 662      BSBW      TST$CONN REJECT      ; ENTRY POINT
02CD 663      MOVL   #DTSS$ BADFUNC,R0   ; ISSUE CONNECT REJECT
02D4 664      MOVAB  W^TST$GT_ERROR,R1  ; GIVE REASON FOR FAILURE
02D9 665      RSB
02DA 666      .END      ; RETURN ADDRESS OF TEST ID STRING
                    ; EXIT
```

50 01F5805B 8F 30 02CA 662
51 0000'CF 05 02CD 663
 05 02D4 664
 05 02D9 665
 05 02DA 666

TSTSDTRTEST
Symbol table

- DTR TEST ROUTINES

L 2

16-SEP-1984 01:27:40
5-SEP-1984 00:22:20

VAX/VMS Macro V04-00
[DTS DTR.SRC]DTRTEST.MAR;1

Page 16
(8)

```

$$COUNT = 00000003
ACCEPT_REJECT = 00000195 R 02
CONN_FAILURE = 00000067 R 02
CONN_SUCCESS = 00000064 R 02
DATA_FAILURE = 00000187 R 02
DISC_FAILURE = 00000200 R 02
DISC_SUCCESS = 000001FD R 02
DTSS_BADFUNC = 01F5805B
DTSS_BADMAIL = 01F5803B
DTSS_BADSUBFCN = 01F58053
DTSS_INVOPTION = 01F58063
EFN_R_CONN_ACCE = 00000001
EFN_K_CONN_REJE = 00000002
EFN_K_DISC_ABRT = 00000004
EFN_K_DISC_SYNC = 00000003
EFN_K_READ_MAIL = 00000000
EFN_K_RECV_DATA = 00000007
INTE_FAILURE = 000002BB R 02
K_LIST_MEB = 00000000
MAX_K_SIZE_DA = 00001000
MAX_K_SIZE_IN = 00000010
MISC_FAILURE = 000002C4 R 02
MISC_SUCCESS = 000002C1 R 02
MSG$ABORT = 00000030
MSG$DISCON = 00000033
RT = 00000000 RG 02
SYSSHIBER = ***** GX 02
TST$BAD_DTR = 000002CA RG 02
TST$CHECK_SS = ***** X 02
TST$CONN_ACCEPT = 0000018D RG 02
TST$CONN_DTR = 00000000 RG 02
TST$CONN_REJECT = 00000192 RG 02
TST$DATA_DTR = 0000006D RG 02
TST$DISC_DTR = 000001A4 RG 02
TST$EXAM_MAIL = ***** X 02
TST$GB_ASTFLAGS = ***** X 02
TST$GB_BACK = ***** X 02
TST$GB_FLOW = ***** X 02
TST$GB_INTEBUF = ***** X 02
TST$GB_NAK = ***** X 02
TST$GB_RQUEUE = ***** X 02
TST$GB_XMITBUF = ***** X 02
TST$GL_FAOARG = ***** X 02
TST$GL_STATUS = ***** X 02
TST$GL_XMITDATA = ***** X 02
TST$GL_XMITINTE = ***** X 02
TST$GQ_DEACCESS = ***** X 02
TST$GT_CONN = ***** X 02
TST$GT_DATA = ***** X 02
TST$GT_DISC = ***** X 02
TST$GT_ERROR = ***** X 02
TST$GT_INTE = ***** X 02
TST$GT_MISC = ***** X 02
TST$GT_STANDARD = ***** X 02
TST$GW_SIZE = ***** X 02
TST$INTE_DTR = 00000206 RG 02
TST$K_MAILBUF = ***** X 02

```

```

TST$MAILAST_DTR ***** X 02
TST$MISC_DTR 000002C1 RG 02
TST$QB_ASTADR ***** X 02
TST$QB_BUFLN ***** X 02
TST$QB_CODE ***** X 02
TST$QB_QHEAD ***** X 02
TST$QIDAST ***** X 02
TST$QIOW ***** X 02
TST$RECVAST_DTR ***** X 02
TST$STANDARD ***** X 02
VAL_K_BACK_NO = 00000000
VAL_K_DISP_NO = 00000000
VAL_K_FLOW_MESS = 00000002
VAL_K_NAK_NO = 00000000
VAL_K_PRIN_NO = 00000000
VAL_K_RETU_NO = 00000000
VAL_K_STAT_YES = 00000001
VAL_K_TYPE_ABRT = 00000001
VAL_K_TYPE_ACCE = 00000001
VAL_K_TYPE_ECHO = 00000003
VAL_K_TYPE_NAME = 00000000
VAL_K_TYPE_SINK = 00000000

```

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
ABS	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
TST\$CODE	000002DA (730.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	36	00:00:00.08	00:00:00.78
Command processing	133	00:00:00.67	00:00:03.18
Pass 1	207	00:00:05.17	00:00:13.99
Symbol table sort	0	00:00:00.23	00:00:00.33
Pass 2	122	00:00:01.89	00:00:05.10
Symbol table output	8	00:00:00.07	00:00:00.10
Psect synopsis output	2	00:00:00.03	00:00:00.10
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	510	00:00:08.14	00:00:23.59

The working set limit was 1350 pages.
25405 bytes (50 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 208 non-local and 31 local symbols.
728 source lines were read in Pass 1, producing 18 object records in Pass 2.
22 pages of virtual memory were used to define 18 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name	Macros defined
_\$255\$DUA28:[DTS DTR.OBJ]DTS DTR.MLB;1	6
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	6
TOTALS (all libraries)	12

289 GETS were required to define 12 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:DTRTEST/OBJ=OBJ\$:DTRTEST MSRC\$:DTPREFIX/UPDATE=(ENH\$:DTPREFIX)+MSRC\$:DTRTEST/UPDATE=(ENH\$:DTRTEST)

0123

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